



University of Manitoba
Faculty of Agricultural & Food Sciences
Department of Biosystems Engineering

Course Details

Course Title & Number: BIOE 0710 Materials Handling

Number of Credit Hours: 3

Class Times & Days of Week: Lectures: MWF 11:30-12:20

Location for classes/labs/tutorials: Online through UMLearn

Pre-Requisites: None

Course Description:

To acquaint students with the fundamentals of moving, processing, and storing agricultural products.

Instructor Information

Instructor(s) Name: Instructor Derek Inglis
I prefer to be addressed as Derek.

Office Location: A206 Agricultural Engineering Building

Office Hours or Availability: Please make an appointment if you wish to meet with me outside of class or laboratory hours.

Office Phone No. 204-474-7964 (do not use due to Covid – work at home)
204-474-5290 (home, text or call)

Email: Derek.Inglis@umanitoba.ca

Contact: You may contact me by phone, by email, or in person. Emails sent after business hours will not likely be answered until the next day.

General Course Information

Lectures will include the following topics: Storage system planning, spoilage of stored grain, control of grain temperature, grain aeration and drying, health hazards, grain handling equipment, seed processing and handling, feed processing and handling, selection of electric motors, emergency power systems.

How does this course fit into the curriculum?

This is an optional course in the Agricultural Diploma program.

Course Goals

The intent of this course is:

- To introduce students to the principles of ecosystems as it applies to storage of agricultural products
- To introduce students to the operating principles and design of aeration and drying equipment
- To explore issues with proper calibration and operation of equipment to maximise productivity and cost efficiency
- To provide students with issues surrounding equipment and operator safety including legal responsibilities and rights

Intended Learning Outcomes

At the conclusion of the course, the student should be able to:

1. Explain principles relating to ecosystems established in stored agricultural products
 2. Evaluate and the explain the use of systems to manipulate the conditions in stored products
 3. Evaluate and the explain the differences between aeration and drying
 4. Apply principles of safety engineering and human factors engineering to the management and operation of agricultural equipment
 5. Explain principles of seed/feed processing and handling
 6. Evaluate the use of equipment used to process agricultural products
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Textbook, Readings, Materials

Required textbook – None

Supplementary readings – Course notes will be provided to the students through UMLearn. Additional readings will be assigned through UMLearn.

Using Copyrighted Material

Please respect copyright. We will use copyrighted content in this course. The content used is appropriately acknowledged and is copied in accordance with copyright laws and University guidelines. Copyrighted works, including those created by us, are made available for private study and research and must not be distributed in any format without permission.

Recording Class Lectures

Derek Inglis and the University of Manitoba hold copyright over the course materials, presentations and lectures that form part of this course. No audio or video recording of lectures or presentations is allowed in any format, openly or surreptitiously, in whole or in part without permission from Derek Inglis. Course materials (both paper and digital) are for the participant's private study and research.

Course Technology

As a courtesy to both the instructors and your classmates, use of cell phones is not permitted during class time. Please remember to switch your cell phone to vibrate mode to avoid interruptions. Laptops may be used during lectures only for the purpose of taking notes. Some course materials will be available through UMLearn.

Class Communication

The University requires all students to activate an official University email account. For full details of the Electronic Communication with Students please visit:

(http://umanitoba.ca/admin/governance/governing_documents/community/electronic_communication_with_students_policy.html).

Please note that all communication between you as a student and your instructors/TAs must comply with the electronic communication with student policy. You are required to obtain and use your U of M email account for all communication between yourself and the university.

Expectations: You Can Expect Us To

Learning is most effective when both the teacher and the student are engaged in the subject material. The role of the teacher, therefore, is to create an environment that facilitates student engagement and learning. In this course, some dissemination of information will occur using the traditional lecture format. However, a substantial portion of the content will be distributed as reading materials, which will be covered using classroom discussion or other learning activities. You can expect us to endeavour to create an active learning environment.

Expectations: We Expect You To

We expect you to be in attendance, and on time, for all scheduled lectures and labs. If you must be absent, please show us the courtesy of sending an e-mail notifying us of your absence.

To benefit the most from this class, you must be willing to participate in class discussions. Therefore, you will be expected to prepare for class by reading the assigned materials.

Academic Integrity:

Plagiarism or any other form of cheating in examinations, term tests or academic work is subject to serious academic penalty. Cheating in examinations or tests may take the form of copying from another student or bringing unauthorized materials into the exam room. Exam cheating can also include exam impersonation. A student found guilty of contributing to cheating in examinations or term assignments is also subject to serious academic penalty. Students should acquaint themselves with the University's policy on plagiarism, cheating, exam impersonation and duplicate submission. Electronic detection tools may be used to screen assignments in cases of suspected plagiarism. [Academic Integrity Tutorial](#)

Students Accessibility Services

Student Accessibility Services

If you are a student with a disability, please contact SAS for academic accommodation supports and services such as note-taking, interpreting, assistive technology and exam accommodations. Students who have, or think they may have, a disability (e.g. mental illness, learning, medical, hearing, injury-related, visual) are invited to contact SAS to arrange a confidential consultation.

Student Accessibility Services <http://umanitoba.ca/student/saa/accessibility/>

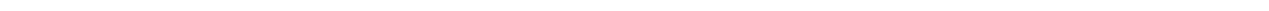
520 University Centre

204 474 7423

Student_accessibility@umanitoba.ca

Important Dates:

Jan 19, Feb 3 &4:	Class cancelled (field trips)
Jan 21:	Last day to drop without penalty
Feb 18:	No class – Louis Riel Day
Feb 16-19:	Winter Term Break
March 10:	Last day for voluntary withdrawal without academic penalty
March 30:	Last day of classes
Apr 1-14:	Examination period



Course Evaluation Methods

The basis of evaluation is established by agreement at the beginning of each term. Weights assigned to various components of work are:

Midterm Examination #1 February 5	15%
Midterm Examination #2 March 5	15%
Assignments (5 total, 5% each)	25%
Final Examination	45%

Grading

The grading scale used for this course is shown below.

Letter Grade	Percentage out of 100
A+	92-100
A	85-91
B+	78-84
B	72-77
C+	66-71
C	60-65
D	50-59
F	Less than 50

Assignment Grading Times

The last date for Voluntary Withdrawal (VW) from the course is November 18, 2016. Students can expect to receive grades for several of the tutorial assignments, the safety engineering midterm, the guard design written report, and several of the design assignments prior to the VW date. Grades for the remaining tutorial assignments, design assignments, the ethics article, and the human factors engineering midterm will be available prior to the end of the term. Grades for the team design project will not be available to students until the end of the examination period.

Assignment Extension and Late Submission Policy

Deadlines are a reality in the world; we expect assignments to be completed on time. Assignments submitted after the due date will be docked 10% per day. All assignments must be submitted to pass the course. There will be no "make-up" midterms; students who miss a midterm with a reasonable explanation will have the value of the final examination increased by the appropriate percentage.
